

# INDEX TO COMMUNICATIONS OF THE ACM

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**E**ntries in this index are technical papers, short communications, award papers, educational reports, special sections, and topical articles. Algorithms are indexed separately.

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The **AUTHOR INDEX** lists the entries in order of alphabetized authors' names. If there is more than one author for an article, each author

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## December 1990 to September 1991 Index by Subject to Algorithms

Algorithms from ACM publications are included here. A cumulative index to algorithms published in *Communications*, the *ACM Transactions on Mathematical Software*, and the *ACM Transactions on Programming Languages and Systems* from 1960 to 1980 may be consulted in "Collected Algorithms from ACM," which is a looseleaf collection of all algorithms, each with certification and remarks, if any, appended.

The 1981 through 1990 indexes appear in the respective December issues of *Communications*.

### REAL ARITHMETIC, NUMBER THEORY (A1)

Smith, D.M. Algorithm 693. A Fortran Package for Floating-point Multiple-precision Arithmetic. 17.2 (June 1991). 273-283.

### QUADRATURE (D1)

Favati, P., Lotti, G., Romani, F. Algorithm 691. Improving QUADPACK Automatic Integration Routines. 17.2 (June 1991). 218-232.

**ORDINARY DIFFERENTIAL EQUATIONS (D2)**

Addison, C.A., Enright, W.H., Gaffney, P.W., Gladwell, I., Hanson, P.M., Algorithm 687. A Decision Tree for the Numerical Solution of Initial Value Ordinary Differential Equations. 17.1 (March 1991). 1-10

**PARTIAL DIFFERENTIAL EQUATIONS (D3)**

Kaufman, L., Warner, D.D. Algorithm 685. A Program for Solving Separable Elliptic Equations. 16.4 (December 1990). 325-351.

Keast, P., Muir, P.H. Algorithm 688. EPDCOL: A More Efficient PDECOL Code. 17.2 (June 1991). 153-166.

Berzins, M., Dew, P.M. Algorithm 690. Chebyshev Polynomial Software for Elliptic-Parabolic Systems of PDEs. 17.2 (June 1991). 178-206.

**INTEGRAL EQUATIONS (D5)**

Blom, J.G., Brunner, H. Algorithm 689. Discretized Collocation and Iterated Collocation for Nonlinear Volterra Integral Equations of the Second Kind. 17.2 (June 1991). 167-177.

**CURVE AND SURFACE FITTING (E2)**

Akima, H. Algorithm 697. Univariate Interpolation that has the Accuracy of a Third-degree Polynomial. 17.3 (September 1991). 367.

**MATRIX OPERATIONS, INCLUDING INVERSION (F1)**

Dodson, D.S., Grimes, R.G., Lewis, J.G. Algorithm 692. Model Implementation and Test Package for the Sparse Basic Linear Algebra Subprograms. 17.2 (June 1991). 264-272.

Higham, N.J. Algorithm 694. A Collection of Test Matrices in MATLAB. 17.3 (September 1991). 289-305.

Eskow, E., Schnabel, R.B. Algorithm 695. Software for a New Modified Cholesky Factorization. 17.3 (September 1991). 306-312.

**EIGENVALUES AND EIGENVECTORS OF MATRICES (F2)**

Schrauf, G. Algorithm 696. An Inverse Rayleigh Iteration for Complex Band Matrices. 17.3 (September 1991). 335-340.

**ORTHOGONALIZATION (F5)**

Reichel, L., Gragg, W.B. Algorithm 686. Fortran Subroutines for Updating the QR Decomposition. 16.4 (December 1990). 369-377.

## Nominating Committee Report on Candidates for 1992 Elections

In accordance with the Constitution and Bylaws for the ACM, the Nominating Committee is scheduled to release its report on November 5th. In order to meet the publication deadline for the December issue of *CACM*, the Nominating Committee is releasing a partial slate at this time. The names of the candidates are presented in random order.

Besides the officers of the Association, there are three Members-at-Large to be elected this year, two to serve for a four-year term, 1992-1996, and one to serve for a two-year term, 1992-1994.

The Constitution and Bylaws provide that candidates for elected offices of the ACM may also be nominated by petition of one percent of the Members of the Association, who are eligible to vote for the nominee as of November 1. Such petitions must be accompanied by a written declaration that the nominee is willing to stand for election. The number of Member signatures required for each office is as follows: 597

President, Vice-President, Secretary and Member-at-Large

The Bylaws provide that such petitions must reach the Elections Committee before January 31. Original petitions for ACM offices are to be submitted to the ACM Elections Committee, c/o Pat Ryan, ACM Headquarters, 1515 Broadway, New York, NY 10036, by January 31, 1992. Duplicate copies should also be sent to Robert Bigelow, Elections Committee Chairman, 10 Converse Place, Winchester, MA 01890.

All candidates by petition are reminded of the requirements stated in the Policy and Procedures on Nominations and Elections

which a candidate for high office must meet in order to serve with distinction. Copies of this document are available from Pat Ryan or Rosemary McGuinness, Office of Policy and Administration at ACM Headquarters office. Statements and biographical sketches of all candidates will appear in the May 1992 issue of *Communications*.

The names of the candidates for the positions that do not appear in this issue will be available in the January, 1992 issue of *CACM*. Anyone interested in this information prior to the release of the January issue should contact Pat Ryan or Rosemary McGuinness at ACM Headquarters, 212-869-7440.

The Nominating Committee would like to thank all those who helped us with their suggestions and advice. It is appreciated.

Roy Cottrell, *Chairman*  
Frances Allen  
Robert Haas  
S. Ron Oliver  
David C. Wood

**FOR VICE PRESIDENT**

Stuart H. Zweben, *Ohio State University*  
John Werth, *University of Texas*

**FOR SECRETARY**

Frank L. Friedman, *Temple University*  
John H. Eskin, *City of Toledo*

